WINDS.

The mean direction of winds at the several stations is represented on Chart No. 2 by the arrows, and it will be observed is generally toward the area of low barometer.

Apart from the storms already described, no high winds were reported, except almost continuous gales at Pike's Peak. During the month of January, thirty-five Cautionary Signals were ordered on the Atlantic coast, embracing those stations between Eastport and Wilmington, and five telegraphic warnings of the approach of storms were sent to Canadian ports. Out of the whole number of signals ordered at the American ports, twenty-eight have been justified by the occurence of dangerous winds at or within one hundred miles of the station at which the signal was ordered.

The observer at Norfolk reports that no vessel attempted to leave the port during the display of signals.

The observer at New Haven reports that the signal on the 7th attracted general attention, as it was ordered twenty-four hours before the dangerous winds occurred.

The signals ordered at Eastport were not verified by the occurrence of winds; but dense fogs prevailed rendering navigation dangerous.

TEMPERATURE.

The general distribution of temperature throughout the United States is indicated by the isothermal lines on chart No. 2.

The table will show that there has been an excess in all the districts, except Minnesota, where it has been normal. The greatest excess has been in the regions of greatest precipitation. The range of temperature has been greater than usual in the Southern States. On the precitation chart will be found the lines marking the southern limit of snow and freezing weather. The mean temperature as calculated from the observations made at the three stations on the Pacific coast is but slightly in excess of the mean for the same period in previous years.

PRECIPITATION.

Chart No. 3 is a graphical representation of the precipitation in the several districts. The local nature of rain-fall, together with the limited number of stations, renders this Chart only approximately correct. Probably the most interesting feature is the excess of rain-fall on the Pacific coast, and its influence on the agricultural interests of that section.

A comparison of the annual wheat crop with the annual rain-fall shows that the yield has been largest in those seasons in which rains have been most abundant. The amount of rain-fall for the past six months is largely in excess of the average, and would appear to indicate a bountiful harvest for 1874.

RIVERS.

Freshets and floods have been reported in the rivers draining the Apalachian Chain, and in those of New England and the Middle States during the 8th, 9th and 10th days of the month. The Ohio river has been unusually high at Cincinnati and Louisville, but has been open during the entire month. Fluctuations, without any decided high waters, have occurred in the Mississippi and Missouri rivers. The latter has been closed during

the entire month above Leavenworth. The Mississippi river was filled with floating ice at Keokuk, from the 5th to the 13th, was closed from the 14th to the 15th. Ice disappeared on the 19th, and reappeared again on the 28th.

At St. Louis the river was closed from the 11th to the 15th, opened on the 18th and ice disappeared on the 27th.

At St. Paul it remained closed during the entire month.

Heavy freshets causing great loss of property have been reported from Buffalo.

FACTS AND METEOROLOGICAL PHENOMENA.

Meteorological observations have been continued at Pike's Peak during the month of January, the station being situated about 14.000 feet above the level of the sea. The monthly means, determined from the three daily observations taken, respectively, at 7 a. m., 2 and 9 p. m., are as follows:

Barometer,	29.80, mean.	30.16, highest.	27.32, lowest.
Temperature,	6°.1 "	23° "	—25° "
Relative humidity .53.			

In comparing the oscillations of the barometer with the changes of temperature, it has been found that the temperature rises with an increase of pressure.

The observer reports peculiar bands of cirri at 4 p. m. on the 10th a little north of the zenith, extending from WNW to SSE, converging near the horizon and having a breadth of 5°. These remained stationary for about an hour, and were finally obscured by fine cirro-stratus clouds or haze.

Numerous auroral displays have been reported from stations north of the fortieth parallel of latitude, the time of occurrence being generally between 8 and 10 p. m. The frequency of these displays apparently depends upon the position of the station in the auroral zone. Those occurring at Boston, New York, Alpena, Duluth, and Breckenridge, between the 15th and 20th, are especially noted as peculiar and brilliant. The observer at Detroit reports evidences of the atmosphere having been charged with electricity on January 21st, the telegraphic instrument working with the batteries disconnected. The observer at Long Branch reports the appearance at 2:10, p. m., on the 4th, of a well-defined "Fog-bow" in the North. He says: "This bow was larger than the usual rainbow, and was perfectly white. It occupied the same position in the horizon that a rainbow would at that hour of the day." The observer at Boston reports that on the 15th light snow fell from a cloudless sky.

The lowest temperature reported from any station during the month was —33° at Breckenridge, Minnesota, on the 24th. The highest barometric reading telegraphically reported during the month was 30.98 inches at Pembina, D. T., January 29th, and the lowest 29.00 at Fort Garry, Manitoba, on the 17th.

PUBLISHED BY ORDER OF THE SECRETARY OF WAR.

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